

Wisconsin Bald Eagle and Osprey Nest Surveys 2014



Photo credit: Michele Woodford

Project Staff:

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Summary

Wisconsin Department of Natural Resources (WDNR) staff from the Natural Heritage Conservation, Wildlife Management and Science Services bureaus completed aerial nesting surveys for bald eagles and ospreys in cooperation with WDNR pilots in spring and early summer 2014. This marked the 42nd consecutive year that these important wildlife surveys have been completed in Wisconsin, which makes it one of the longest running surveys of its kind in North America. Surveys found 1,279 occupied eagle nests and 542 occupied osprey nests. Numbers were down for eagles this year as some counties were not surveyed entirely due to staff changes. Observers reported 1,034 bald eagle nestlings and a statewide nest success rate of 63% during productivity surveys that occurred in May and June. Nest success by survey area for eagles ranged from 51-96%. Occupied eagle nests were observed in 66 of 69 (96%) counties surveyed and 57 of 72 (79%) counties had occupied osprey nests. Additional project work included nest management guidance, construction project reviews, forest management guidance and winter eagle roost counts along the lower Wisconsin River.

Acknowledgments

Local eagle and osprey nest information was provided by Rebecca Key and Bill Route (Apostle Island National Lakeshore and St. Croix National Scenic Riverway) and numerous WDNR field staff. Aircraft pilots flying these surveys included: Mike Weinfurter (Rhinelander), David Lemke (Rhinelander), Leo Bunderson (Eau Claire), Bev Paulan (Eau Claire), Phil Miller (Siren), Joe Sprenger (Siren), Mike Callahan (Oshkosh), Luke Wuest (Oshkosh) and Jeff Oimoen (Madison).

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Bald Eagles

All nest surveys were completed using a WDNR aircraft and pilot and at least one other trained observer. The first bald eagle survey was flown in early April to locate occupied nests and the second survey was flown in late May and June to count young and determine nest success. Additional ground observations were provided by landowners, birders, volunteers and raptor banders; this information is used to supplement and check aerial data. Regional reports were developed by area observers (Appendix 1) that detail bald eagle and osprey nest locations and provide summarized information on productivity rates by county (Figure 1).

We found 1,279 eagle nests occupied by breeding adults in 2014 (Figure 1). This was a decrease of 65 pairs from 2013 surveys (Figure 2). This drop does not reflect the actual abundance of occupied eagle nests in Wisconsin as three counties (Buffalo, Dunn and Pepin) were not surveyed at all and two others (Grant and Crawford) were only partially surveyed due to observer changes in these areas. An occupied nest was defined as a nest where one or more of the following was observed: incubation, eggs, young or a repaired nest. As in past years, Vilas ($n = 151$) and Oneida ($n = 144$) counties had the highest number of occupied eagle nests. These two counties represent most of the Northern Highland Ecological Landscape, which has one of the highest concentrations of lakes in the world. Bald eagles occupied nests in 66 of the state's 69 counties surveyed in 2014 (96%; Figure 1), and the number of occupied nests continued to increase in the southern, eastern and central portions of the state (survey areas 2, 3, 4, and 7; Appendix 1).

Observers were able to determine nest productivity at 1,136 of the occupied eagle nests in Wisconsin (Table 1) during the second survey. The other 143 nests reported as occupied during the first survey either were not checked or were obscured from view. Nests in deciduous trees can be obscured from view after the tree is fully leafed-out. We observed 1,034 young at 715 successful nests, which equates to 0.91 young per occupied nest for those nests with known outcomes and 1.45 young per successful nest. Nest success statewide for those nests with known outcomes was 63%. For successful nests, 58% produced one young, 40% two young and 2% three young.

As in 2013, there were some large differences in nest success rates between survey areas. In 2013 area 1 and 2 had the lowest nest success rates of 62% and 52%, respectively. In 2014, nest success was above average in survey area 1 (69%) but remained low in area 2 (51%; Table 1). Below average nest success was observed in survey area 5 (52%) in 2014. The reason for the drop in nest success observed in area 5 is unclear. Survey area 2 (i.e., north central Wisconsin) appears to have one of the highest densities of nesting bald eagles

anywhere in North America. Nonetheless, the number of occupied territories within this area of the state continues to grow, with 474 reported in 2013 and 489 in 2014. Lakes remained ice-covered well into the nesting season in Survey Area 2 in both 2013 and 2014 – as late as early May in Vilas County. Survey areas with the greatest observed proportional increase in occupied nests from 2013 to 2014 were southeast (+67%; area 7) and central (+29%; area 4) Wisconsin.

The Federal Bald and Golden Eagle Protection Act provides protection for all eagle nests, nest trees and adjacent habitat. Throughout the state project staff are commonly contacted by private landowners and public land managers for recommendations to protect bald eagle and osprey nests from disturbance. On public properties, habitat is managed to promote tall snags and large, super-canopy white pines for nest trees. Project staff annually makes recommendations at over 100 sites to protect nests where disturbances such as timber sales, utility and telecommunication projects, housing development and road construction are being planned. In the past 25 years, WDNR staff made management recommendations that protected over 80% of all known eagle and osprey nests. Accurate nest locations, nesting activity and management guidance continue to be important factors in the long term conservation of Wisconsin's bald eagle and osprey populations.

Wintering Eagles

Wintering bald eagle numbers are recorded throughout Wisconsin during the annual Midwinter Bald Eagle Survey that is conducted in conjunction with annual winter waterfowl surveys in the state by DNR field staff, landowners and volunteers. In 2014, the count was conducted between January 1 and January 15. Observers counted the number of bald eagles observed on specific routes that are repeated every year. Surveys are conducted by plane, vehicle, boat and on foot. In 2014, 41 midwinter bald eagle survey routes were completed; observers counted 637 bald eagles (423 adult, 192 immature and 22 unknown).

Table 1. *Summary of 2014 bald eagle productivity surveys in Wisconsin.*

Survey Area¹	Occupied Territories	Successful Territories²	Total Young	Young Per Occupied Territory	Young Per Successful Territory	Percent Nest Success³
Area 1	314	174	218	0.69	1.25	69
Area 2	489	244	335	0.69	1.37	51
Area 3	162	128	196	1.21	1.53	82
Area 4	49	36	60	1.22	1.67	80
Area 5	161	60	92	0.57	1.53	52
Area 6	79	52	88	1.11	1.69	79
Area 7	25	23	45	1.80	1.96	96
Total Territories	1,279					
Territories with Known Outcome	1,136	715	1,034	0.91	1.45	63

¹ Survey areas are shown in Appendix 1.

² Successful territories included those where one or more young were present at the time of the productivity flight.

³ Percent nest success calculated only for those territories with known outcome.

Occupied Bald Eagle nests 2014 (n = 1,279)

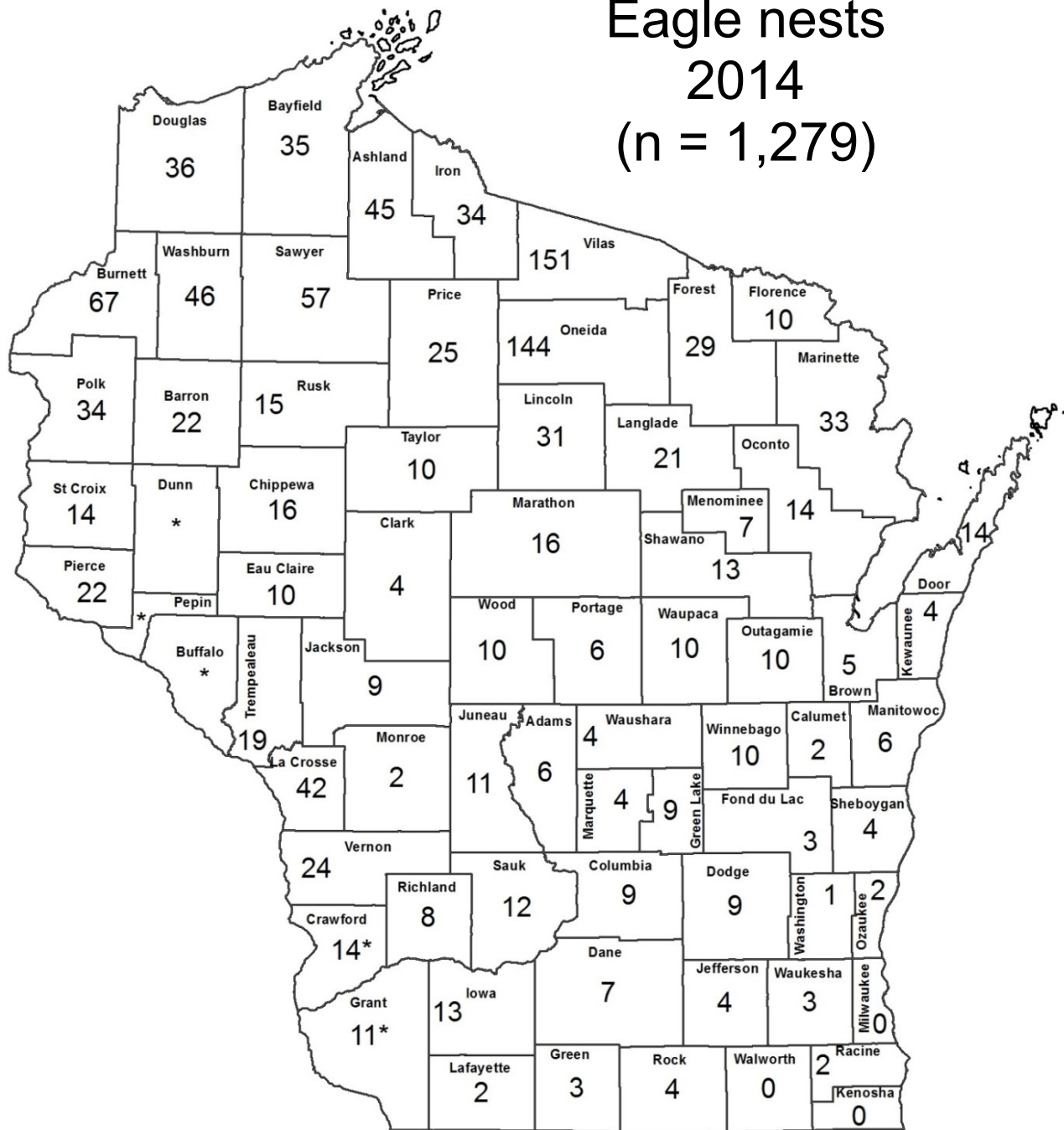


Figure 1. Occupied eagle nests where the observer recorded at least one of the following: a repaired nest, an incubating adult, eggs or young in the nest. (Counties with an asterisk were not surveyed or only partially surveyed due to staffing changes this year)

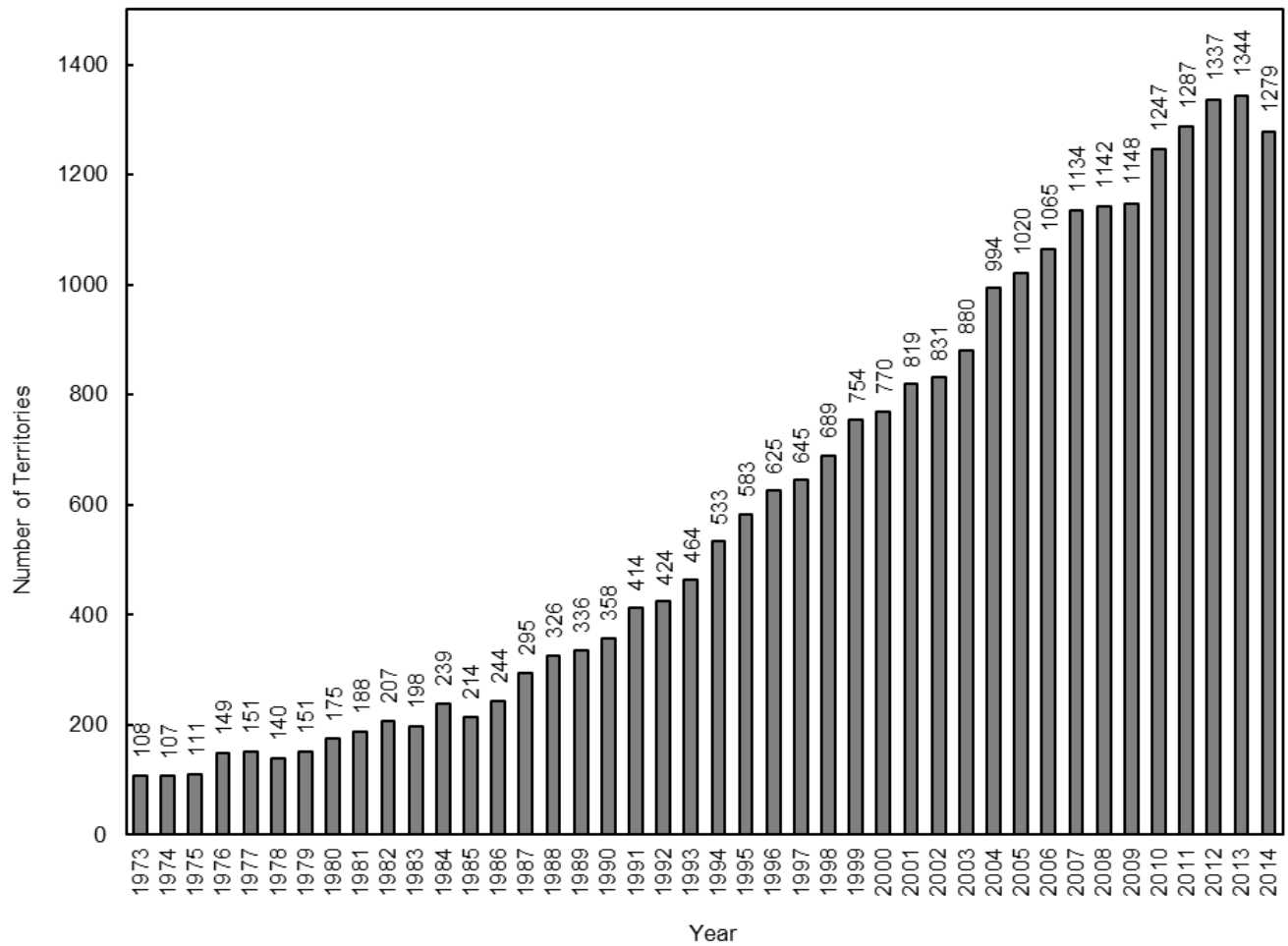


Figure 2. *Occupied bald eagle nests in Wisconsin, 1973-2014. Bald eagle information for the years 1973 to 1989 was summarized from annual surveys completed by Charles Sindelar, Waukesha, WI.*

Ospreys

The first osprey flight was completed in May to locate occupied nests. There were 542 occupied osprey nests found statewide in 2014 (Figure 3). This was an increase of 7 pairs from 2013 (Figure 4) and the highest number ever recorded for Wisconsin. Oneida county had the most occupied nests ($n = 88$) and ospreys nested in 57 of the state's 72 counties (79%; Figure 3). The number of occupied osprey nests increased in survey areas 1, 3, 4, 5 and 7 but decreased in north-central and southwest Wisconsin (survey areas 2 and 6).

Funding constraints limited the extent of the second osprey nest survey to only Iron, Oneida and Vilas counties, which was completed in mid-July to count young. The productivity of 146 osprey pairs was determined in 2014 (Table 2), which included 5 nests from 3 additional counties in area 2, and 15 nests from 5 counties in area 5. These 146 pairs produced 139 young, averaging 1.43 young per successful nest and a 66% nest success rate (Table 2). Of the 97 successful nests, 57% had one young and 43% had two young.

Osprey nest success was high in Iron County, with 84% of 16 nests successfully producing young at the time of the productivity flight. In Oneida County, the nest success rate was lower, with 63% of 88 nests successfully producing young at the time of the productivity flight.

Table 2. *Summary of 2014 osprey productivity surveys in Wisconsin.*

Survey Area¹	Occupied Territories	Successful Territories²	Total Young	Young Per Occupied Territory with Known Outcome	Young Per Successful Territory
Area 1	126				
Area 2	178	89	127	0.97	1.43
Area 3	130				
Area 4	62				
Area 5	22	8	12	0.80	1.50
Area 6	13				
Area 7	11				
Total Territories	542				
Territories with Known Outcome	146	97	139	0.95	1.43

¹ Survey areas are shown in Appendix 1.

² Successful territories included those where one or more young were present at the time of the productivity flight. Only three counties in Area 2, Iron, Oneida and Vilas counties, were surveyed in their entirety for osprey productivity. No other aerial productivity surveys were conducted; additional productivity data was opportunistically collected.

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Figure 3. Occupied osprey nests where the observer recorded at least one of the following: one or more adults at a repaired nest, an incubating adult, eggs, or young in the nest.

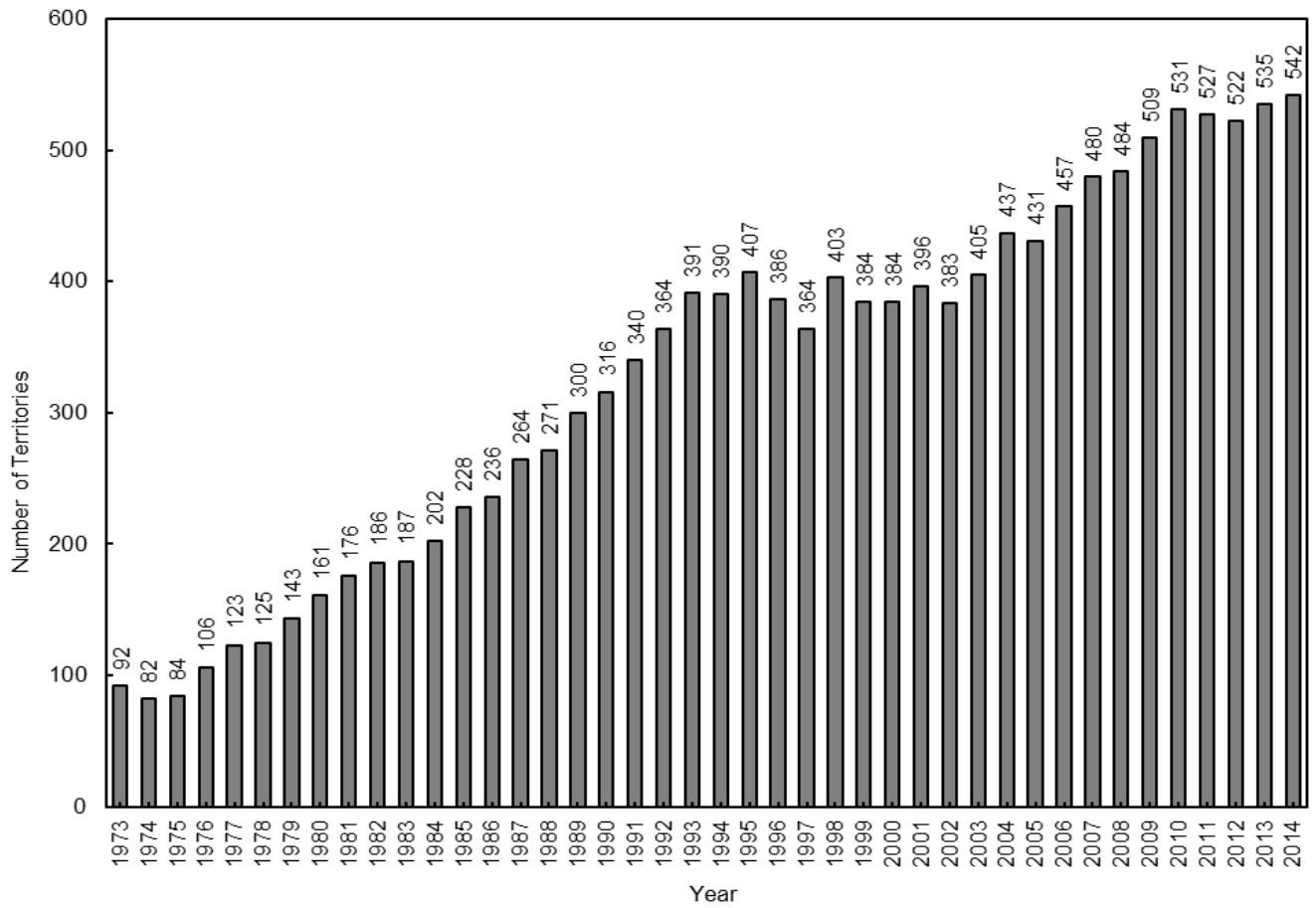


Figure 4. *Occupied osprey nests in Wisconsin, 1973-2014.*

Appendix 1. Wisconsin Natural Heritage Inventory (NHI) eagle and osprey contact list.

DNR Area Eagle/Osprey Survey Contacts

For the latest and most complete information on the location of eagle and osprey nests (rev. 12/2014)

Area 1

Ryan Magana, 715-635-4153
DNR, 810 W Maple St.
Spooner, WI 54801
Ryan.Magana@wisconsin.gov

Area 2

Carly Lapin, 715-365-8954
DNR, 107 Suttill Ave.
Rhineland, WI 54501
Carly.Lapin@wisconsin.gov

Area 3

Steve Easterly, 920-303-5427
625 E County Road Y, Suite 700
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Area 4

Mandy Kamps, 715-359-5508
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Wausau, WI 54401
Amanda.Kamps@wisconsin.gov

Area 5a

Cale Severson, 608-789-5543
DNR, 3550 Mormon Coulee Rd.
La Crosse, WI 54601
Cale.Severson@wisconsin.gov

Area 5b

Dean Edlin, 608-685-3252
DNR, 1300 W Claremont Ave.
Eau Claire, WI 54701
Dean.Edlin@wisconsin.gov

Area 6

Dan Goltz, 608-375-4231
DNR, 5350 Hwy 133E
Boscobel, WI 53805
Daniel.Goltz@wisconsin.gov

Area 7

Seth Fisher, 262-424-1112
DNR, N6078 Co Hwy O
Elkhorn, WI 53121
Seth.Fisher@wisconsin.gov

Eagle Carcass Submissions:

Necropsy Required for:

**Banded Eagles*

**LE cases*

**Within 5 miles of Great Lakes*

(Dec - Mar 31)

**Within 5 miles of lower WI River*

